MOD 10 AND MOD 10+5 DUNS NUMBER CHECK CALCULATIONS

MODULUS TEN CALCULATION (MOD 10 CHECK)

The first eight digits of a D&B D-U-N-S® Number are sequentially machine generated. The ninth digit is a check digit.

The check digit was built into the D&B D-U-N-S® Number to catch input errors. This check digit catches 100% of the single digit errors and 98% of the single transposition errors (i.e. adjacent digits). The check digit is calculated by a routine known as the Modulus Ten Calculation.

04-997-7473

The D&B D-U-N-S® Number listed above is correctly formatted and passes the MOD 10 Check. The ninth digit (the "3" in this example) is the check digit. A combination of digits is used to calculate (or verify) the check digit for any D&B D-U-N-S® Number. That combination of eight digits is:

1 2 1 2 1 2 1 2

In order to calculate or verify a check digit, the first eight digits of the D&B D-U-N-S® Number – without the check digit – are placed directly above the checking combination as shown below. Each upper digit is then multiplied by the digit below it:

0 4 9 9 7 7 4 7
x1 x2 x1 x2 x1 x2 x1 x2

0+8+9+1+8+7+1+4+4+1+4 = 47

Add the digits, treating each one as a separate number (that is 18 becomes 1 and 8). In this example, the total is 47. Subtract this total, 47 from the next highest multiple of 10, (that is 50 in this case).

50 – 47 = **3**
3 = check digit

This matches the ninth digit in the given D&B D-U-N-S® Number 04-997-747**3**. Therefore the number is valid. The Mod Ten Check is normally automatically performed at the time of data entry.

D&B D-U-N-S® NUMBER EXPANSION AND MOD 10+5

To ensure an adequate supply of D&B D-U-N-S® Numbers, D&B implemented an alternate check digit calculation, MOD 10+5, during December 1997. The new check digit calculation provides an additional 100,000,000 D&B D-U-N-S® Numbers.

The MOD 10+5 calculation is virtually identical to the original Modulus Ten calculation. The important difference is that after performing the original calculation, add five to the result.

The MOD 10+5 check is illustrated here using the same eight digits as above, 04-997-747?

50 – 47 = 3
3 + 5 = **8**

8 = check digit

This creates a unique D&B D-U-N-S® Number of 04-997-747**8**.

If the original check digit calculation is greater than a 4, then add 5:

$$9 + 5 = 14$$

then subtract 10 to determine the check digit:

$$14 - 10 = 4$$

4 = check digit

The MOD 10+5 the system continues to catch over 99% of D&B D-U-N-S® number input errors.